

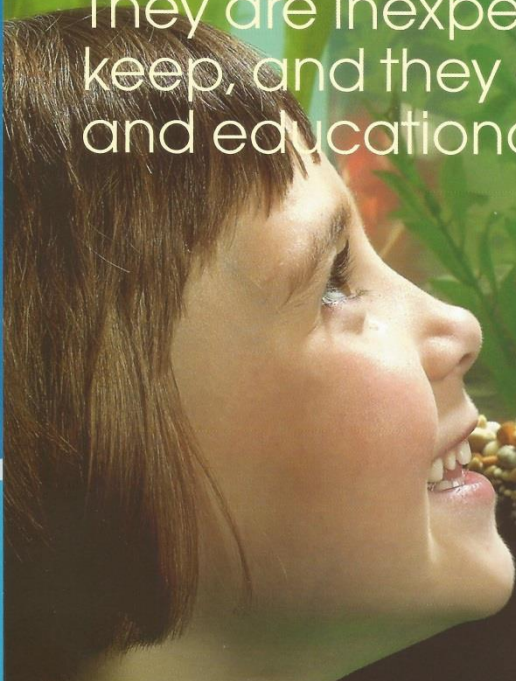
## STARTING OUT WITH GOLDFISH



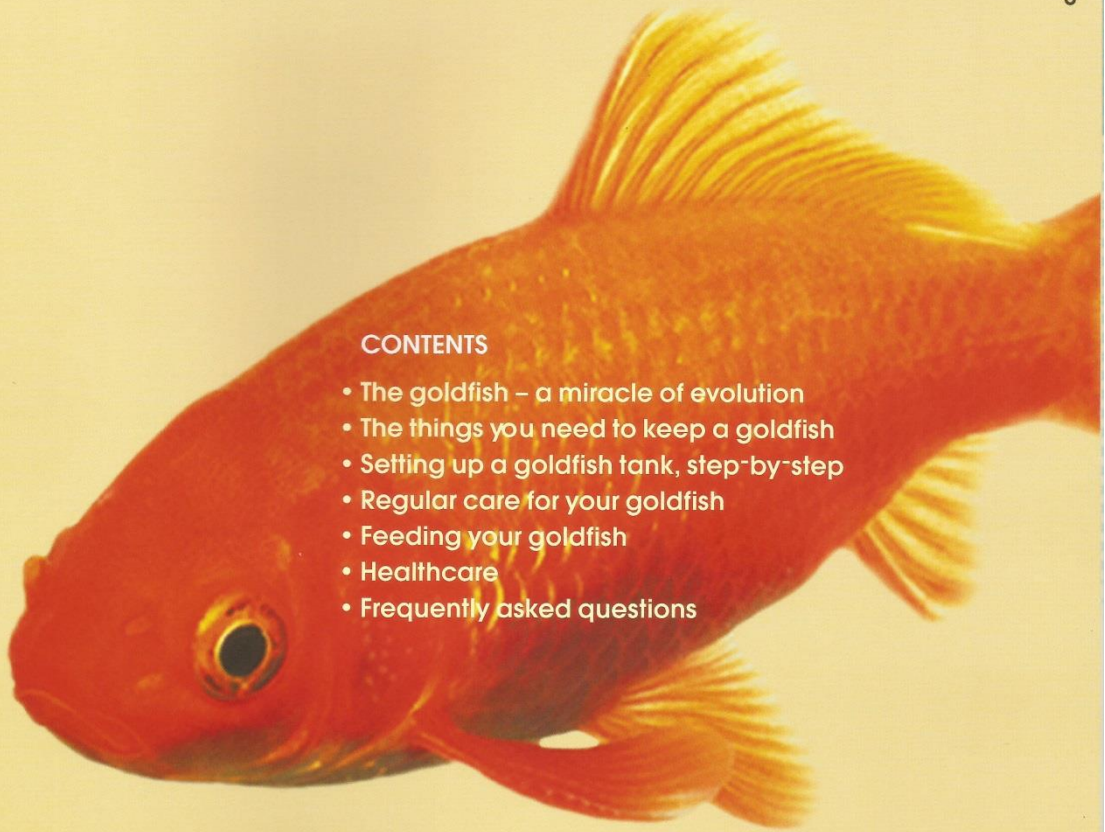
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### GOLDFISH, THE IDEAL PET.

Goldfish are one of the world's most popular pets. They are available in a range of beautiful colours and shapes. They are inexpensive to buy, and to keep, and they are both fun to watch and educational.







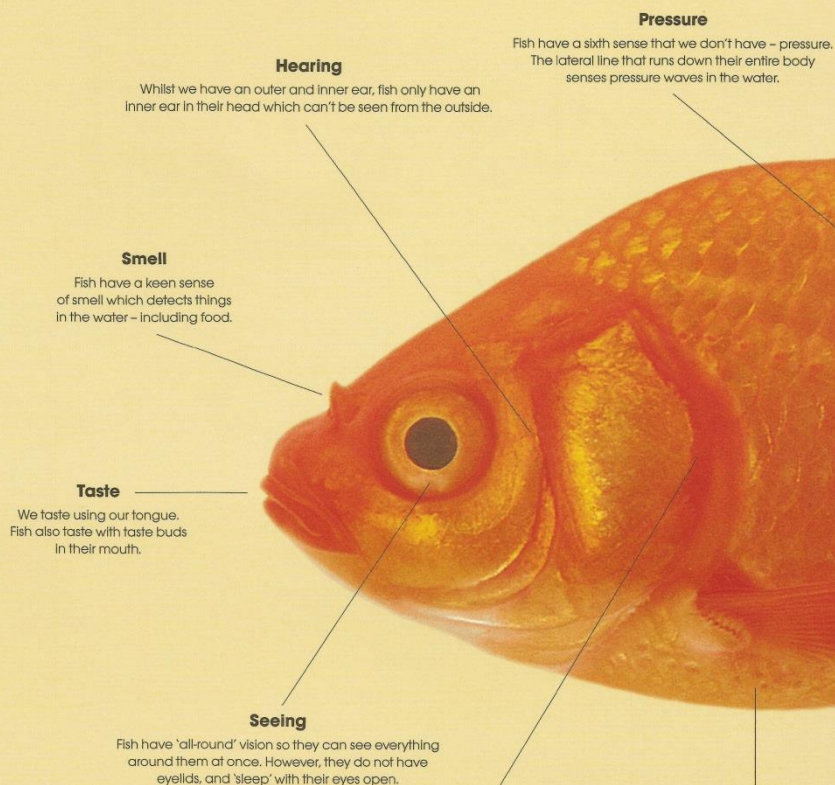
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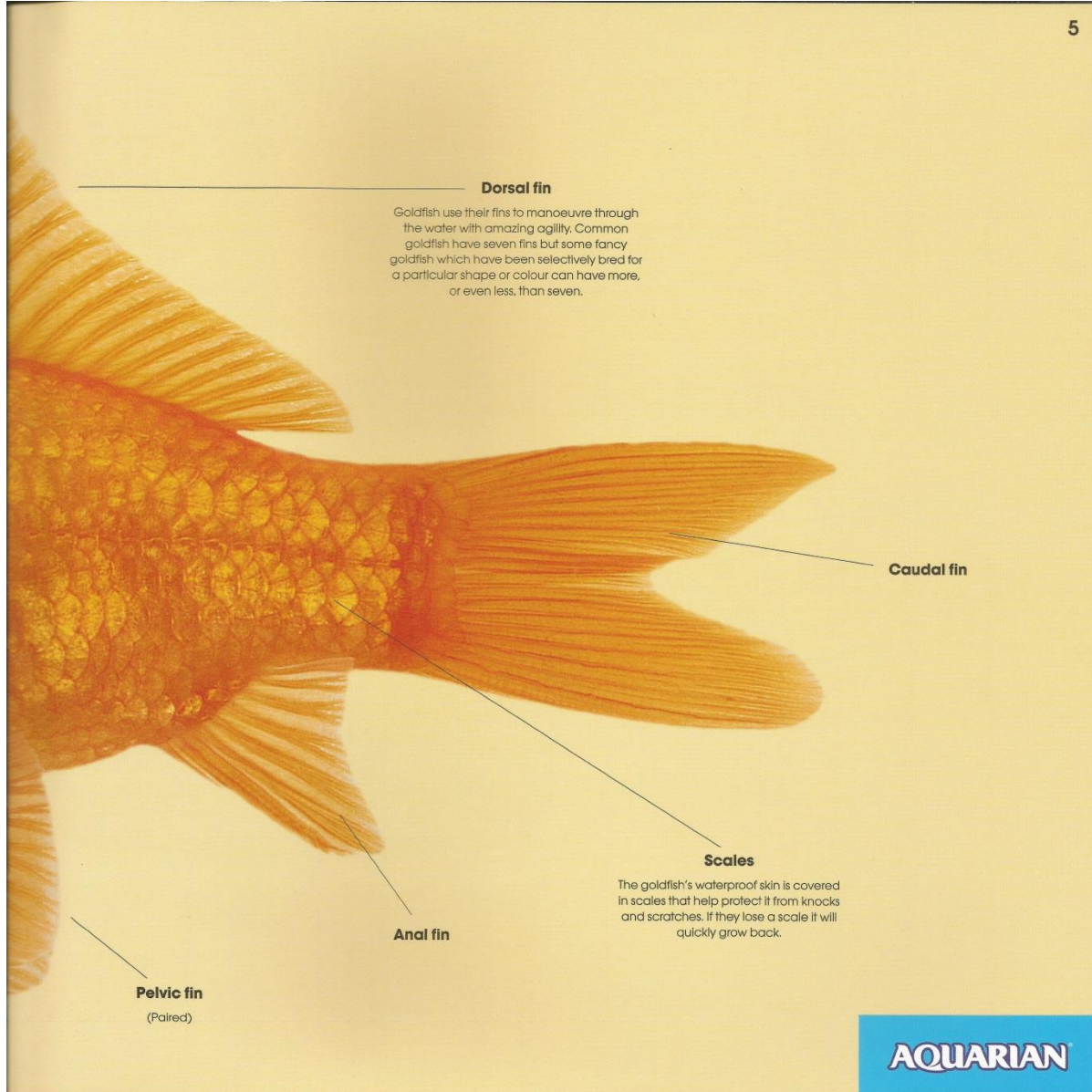
Goldfish are relatively easy to look after. All you need to spend is a couple of minutes each day for feeding, and ten minutes or so every week for water changes. With the right care, goldfish can easily live for ten or more years. For children, goldfish are an ideal first pet – helping them understand their responsibilities in caring for other creatures. But, whatever your age, goldfish are great!

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## A MIRACLE OF EVOLUTION







### Dorsal fin

Goldfish use their fins to manoeuvre through the water with amazing agility. Common goldfish have seven fins but some fancy goldfish which have been selectively bred for a particular shape or colour can have more, or even less, than seven.

### Caudal fin

### Scales

The goldfish's waterproof skin is covered in scales that help protect it from knocks and scratches. If they lose a scale it will quickly grow back.

### Anal fin

### Pelvic fin

(Paired)

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## THE THINGS YOU NEED

It's really simple. The basic equipment comprises a tank and cover, some gravel and decorations, plus a few miscellaneous bits and pieces. These can be found at your local aquatic shop and at many pet shops. The shop staff can help you with your selection.

### A cover with lights

Choose a tank that has a cover. This will prevent your fish from accidentally jumping out, and stop household dust getting into the water. Better still, you can buy a special hood that has a light fitted inside. Tank lighting will show off your fish's beautiful colours and make the tank a centre of attraction. A tank light will also enable you to grow live aquatic plants, if you wish.

### A bowl or tank?

It is not recommended to keep goldfish in bowls. The traditional goldfish bowl is too small for even a single fish, and is prone to cloudy water problems. Your goldfish will be much healthier and happier if kept in a rectangular tank. Ideally, choose a tank that holds at least 45 litres (10 gallons) of water – the bigger the better!

### Plants

Whether they are artificial or real, plants make the aquarium look prettier. If you are just starting out then it is probably easier using plastic or silk aquarium plants. You can try your hand at growing real ones later.

### Rocks

Large stones or rocks can give an aquarium a natural look and also give the fish a place to hide when they want a bit of peace and quiet. It is safer to use rocks that are sold for aquarium use, rather than collect your own. Certain stones found in the country may contain harmful impurities or may dissolve in the water, with the risk of upsetting the fish.

### Gravel

Only use aquarium gravel as sold in a pet or aquatic shop which contains stones that won't dissolve in the water. Use a clean bucket to rinse the new gravel under the cold tap, to remove any trapped dirt or dust.

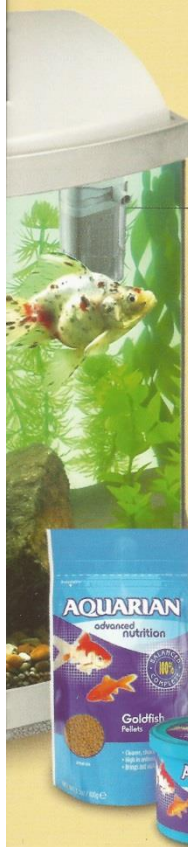
### Expanded polystyrene

Some tanks need to be stood on a polystyrene sheet to help level out any uneven surface under the tank – refer to the tank manufacturer's instructions.





## A BASIC CARE KIT



### Filter

Proper filtration is important for your fish's health and well being. A filter will help keep the water clearer and cleaner. It works by removing the fish's solid and liquid wastes that would otherwise build up and eventually pollute the aquarium. A filtered aquarium therefore needs fewer water changes, so saving you time. An aquarium filter needn't be expensive and most models are very easy to maintain, so it is well worth the investment.

### Air Pump

An air pump helps maintain good oxygen levels in the water. The rising column of bubbles can also look attractive. In addition to the pump, you will also need to buy a length of air-line tubing and a bubbler (diffuser).

### Goldfish food

Feed only top quality goldfish food, such as produced by Aquarian®. Aquarian® Goldfish Flakes are ideal for small to medium sized goldfish. Large goldfish may prefer Aquarian® Goldfish Pellets. Aquarian® foods will help keep your goldfish healthy and the water clearer and cleaner.

You will need a few additional things to help you keep your aquarium in good condition and your fish healthy and happy.

### Water conditioner

Tap water contains chlorine disinfectants that are harmful to fish. A tap water conditioner that removes these disinfectants must therefore be used when you fill up your tank and also when making partial water changes. Choose a water conditioner product such as Goldfish Protect® or Stress Coat® (available from your pet or aquatic shop) that removes both chlorine and chloramine disinfectants. API® Goldfish Protect and Stress Coat® additionally neutralise any harmful heavy metals that may be present in some water supplies.

### Two plastic buckets

One to take the old water when you siphon it out at water changes. The other to hold fresh tap water (and water conditioner) when refilling the aquarium. Set aside these buckets for aquarium use only. Never fill the buckets with soaps, detergents or other household cleaning agents as even trace amounts of these domestic chemicals can harm fish.

### A length of plastic tubing

To siphon out water when you're doing water changes.

### A measuring jug

For measuring and mixing water treatments.

### A net

To remove uneaten food and debris.

### An old towel

To mop up spills and dry your hands. Always wash your hands thoroughly after contact with the water in your aquarium.

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## SETTING UP, STEP-BY-STEP



### 1 Choose the best location

It is best to avoid window positions or anywhere that receives direct sunlight as this may encourage algae. Also avoid placing the tank too close to fires or radiators as these can over-heat the water. Bear in mind that a tank filled with water may be heavy so ensure it is stood on a strong, level base.

### 2 Clean your tank

Wipe down the inside glass panels using kitchen towelling wetted in clean warm water. Never use soap, detergents or boiling water.

### 3 Put your tank in position

Place the tank on a sheet of polystyrene (if recommended by the tank manufacturer).

### 4 Wash the gravel

Put the gravel you have purchased from a pet or aquatic shop in a bucket and rinse under the tap - agitating the gravel to remove dirt and dust. Do this until the water runs clear.

### 5 Put the washed gravel in your tank

About 2.5cm (one inch) or about 5cm (two inches) deep if you intend to grow live plants.

### 6 Add rocks, plants and ornaments

This is where your artistic talents can be unleashed! Experiment with the rocks and ornaments in various positions until you achieve a pleasing effect. As a tip, place tall plants near the sides and back of the tank, and shorter ones in the centre.

**Note:** If using live plants, these should be planted after the tank has been filled with water.

### 7 Add the water

Fill the tank with water from the cold tap. Because tap water contains chlorine (which fish don't like) you'll need to treat it with an aquarium water conditioner that removes the chlorine. You can buy a bottle of water conditioner solution such as API® Goldfish Protect or Stress Coat® from the

aquarium shop. Simply put the tap water into a clean bucket, then mix in the appropriate amount of water conditioner. Never expose fish to untreated tap water as the chlorine may harm them. To avoid disturbing the gravel, slowly pour the treated tap water on to one of the rocks or onto a small plate stood on the gravel bed. If the gravel gets churned up then it may cloud the water. But don't worry, it should clear in a day or so. If cloudiness persists, use a special water clearing solution such as API® Accu-Clear® (from the aquarium shop).

### 8 Install the filter and switch it on

### 9 Wait at least 24 hours

Before adding fish you need to ensure that all the equipment (e.g. filter, pump) is working properly and the water has had time to stabilise.

### 10 Begin to choose and buy your fish

It is important to start out with strong, healthy fish. Go to a pet or aquatic shop with a good display of goldfish and ask for advice. Apart from the ordinary goldfish there are lots of fancy varieties to choose from, such as the elegant fantails, black moors and pearlscales or the odd-looking lionheads and globe-eyes. The choice depends on your personal taste. Even if your tank is very large, it is important to buy just one or at most two fish initially. You can slowly build up the numbers, if tank space allows.

### 11 Add your fish

Float the bag of fish in the tank for 10 minutes, to equalise the temperature. Then gently open the bag and let them swim out into their new home.

### 12 Give your fish AQUARIAN® Goldfish flakes or AQUARIAN® Goldfish pellets

This will help your fish settle.

### 13 Sit back and enjoy your creation!



## REGULAR CARE

How often you need to service an aquarium will depend on its size, the number of fish, and whether it has a filter. The following is therefore a general guide only.



### Every Day

#### Spend a minute or two checking your fish and the aquarium

If your fish do develop a problem then the earlier you know about it, the easier it is to remedy it. (Refer to the section on healthcare for common symptoms).

Also check your tank equipment is running properly, especially the filter.

#### Feed AQUARIAN Goldfish food twice a day

See section on feeding (page 10).



### Every Week

#### Partial water changes

Every week remove about one quarter to one third of the water from the tank using a clean jug or siphon tube. If your tank does not have a filter you may need to do this more often.

Replace with cold tap water that has been treated with a water conditioner (see Step 7 of the set-up guide). If the tap water is much colder than that in your tank you can warm it to the right temperature by adding a little hot water (eg. from a kettle) to the bucket.

The ideal temperature range for aquarium goldfish is 17–24°C (62–75°F). Check the temperature using a glass thermometer.

#### Filter Maintenance

Clean and service the filter if necessary (usually when the flow slows down). How you should look after your filter depends on what type you have – some filter materials need to

be thrown away and replaced regularly, while others may need a rinse out in a jug of water taken from the tank (discard the dirty water afterwards). As a rule, you should not wash filter materials under the tap, as the chlorine disinfectants may destroy the friendly bacteria which live in the filter. If unsure refer to manufacturer's instructions or ask your shop for advice.

You can add some API® Goldfish Aquarium Cleaner or API® StressZyme® solution. This will help break down waste matter within the aquarium and improve the effectiveness of the biological filter (if fitted).

About once a month, the gravel may need to be cleaned. This is easiest to do using the end of a siphon tube to tumble the gravel, release trapped dirt, and suck it up. You can also use your hand to swirl the gravel and then net the debris out. It is not advisable to completely empty the tank; a 25-30% water change performed when needed is easier for the fish to handle than a 100% water change. Routine maintenance is always preferable over a complete water change and fish should remain in the tank as much as possible. Be careful not to suck up fish when using a gravel cleaner.

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## GOOD FOOD FOR GOOD HEALTH

Choosing the right food for your goldfish is very important.

Remember, the food you feed to your goldfish is its only source of nourishment!

#### Naturally... Aquarian®

With Aquarian® Goldfish Food you can be sure you are giving your goldfish a perfectly balanced diet containing all the special nutrients your goldfish needs to stay healthy and colourful.

#### Goldfish love the natural taste

Your goldfish has a well developed sense of taste and will reject food which it doesn't like. Apart from this uneaten food ending up polluting the water in the tank, when your goldfish are not eating their food, they are not getting the nourishment they need to stay healthy.

Studies over many years confirm that goldfish really do enjoy the natural taste of Aquarian® – put a few flakes or pellets in the water and watch how quickly and eagerly your goldfish eat it.

#### Cleaner, clearer water

The special natural recipe of Aquarian® is also very easy for your fish to digest which means that more of the food you feed ends up as nourishment for your goldfish and less as pollution.

Aquarian® Goldfish Food helps your fish stay healthy and active and the water in your aquarium stay clear and clean.

## ADVANCED NUTRITION

Aquarian® goldfish flake food comprises four individual flake types, each with specific nutritional benefits



Brown  
With kelp



Yellow  
High carbohydrates flake  
with natural protein



Red  
Rich in fish protein



Orange  
With extra vitamins and natural  
anti-oxidants







#### How much Aquarian® do I feed?

Because Aquarian® is so nutritious you don't need to feed a lot to keep your goldfish happy and healthy. Ideally, feed your goldfish twice per day, in the morning and early evening. At each feed give them only as much food as they can consume within five minutes.

Remove any excess food (using a fine meshed net or siphon tube) that is remaining after about five minutes. You'll soon be able to judge the correct amount to feed!

#### Weekends and holidays

You can safely leave your goldfish without food for a couple of days, so weekend trips away present no problems. For longer periods it is advisable to get a friend or neighbour to pop in every few days to check and feed your fish and change their water if necessary.

If you are worried about your fish being accidentally over fed, you can pre-measure each food ration for each day into a small sealed pot.

Alternatively, use a "feeding block" (such as the API® 3-day, or 7-day, fish feeder™) that slowly releases food into the water over several days.

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## HEALTHCARE

Prevention is better than cure so buy healthy looking fish from a reputable aquatic or pet shop. Goldfish are hardy creatures but, like any pet, they may sometimes get sick. Many ailments are triggered by poor water conditions (eg. dirty aquarium water) or poor nutrition, so keep the aquarium properly maintained and always feed a quality diet such as Aquarian® Goldfish Food.

Fortunately, most common ailments of goldfish can be treated with liquid remedies that are available from the aquatic or pet shop. These are generally added to the aquarium water and come with full instructions.

#### What to do if your fish looks sick

Bear in mind that unhygienic aquarium conditions (eg. dirty water, dirty gravel) are a common cause of many fish ailments. So at the first sign of any illness perform a partial water change – say one third to one half, just in case it is a water problem. Remember to treat the replacement tap water with a water conditioner, and adjust its temperature if necessary. Try and identify the problem by referring to the ailments chart opposite. If you are unsure what your goldfish is suffering from, seek advice from your aquarium shop. It may help to get a sample of your aquarium water tested. Many aquatic shops offer a water testing service for a small fee. Take them a cupful of aquarium water in a clean glass jar. They will explain the test results and suggest any remedial action that may be required. Better still, buy some test kits for use at home. The API™ Test Strips are incredibly easy and rapid to use, saving you trips to the aquarium store every time you want your water tested. There are various products on the market to deal with aquarium water problems. For example, Ammo-Lock™ effectively deals with a build up of toxic ammonia in the water which can arise in newly set up aquariums.



#### Further help and advice

Visit your aquatic shop or a pet shop with a good range of fish. The staff will be happy to help and advise if you have a goldfish problem.

Check on the Aquarian® website [www.aquarian.co.uk](http://www.aquarian.co.uk) where you will find a lot of useful information. You can also e-mail questions directly to fish experts, through the [www.aquarian.co.uk](http://www.aquarian.co.uk) website.

**Address:** Aquarian Advisory Service, PO Box 5059, Melton Mowbray, Leicestershire, LE14 4ZN.

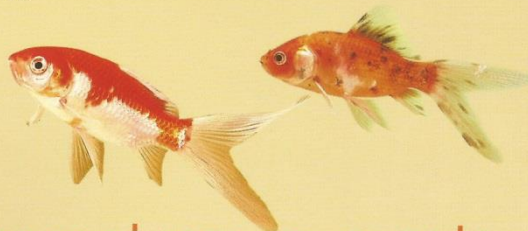
#### Special goldfish clubs and societies

If you become hooked on goldfish, then why not join a specialist goldfish society? It's a great way to meet new friends! Some societies hold regular meetings where you can talk to other goldfish keepers and learn from their experiences. Or you may wish to join a society that mails out a regular newsletter to its members. See the Aquarian® website [www.aquarian.co.uk](http://www.aquarian.co.uk) for a list of societies.

#### Magazines and books dealing with goldfish

Fish-keeping magazines such as Practical Fishkeeping have regular features on goldfish. You'll find these monthly magazines for sale in some aquatic shops and newsagents.

Some aquatic shops, pet shops and online stores will have a selection of titles in stock and libraries also keep many fishkeeping books.











[www.aquarian.co.uk](http://www.aquarian.co.uk)

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Symptoms	Likely causes	What should I do?
 Cotton-wool like growths on the skin or fins.	Fungus infection. Dirty water conditions may trigger fungus outbreaks.	Treat the aquarium with an anti-fungus remedy such as Pimafix® or API® Liquid Fungus Cure. Improve aquarium hygiene, where necessary.
 Numerous small white spots on body and fins.	Whitespot disease. (also known as "Ich").	Treat the aquarium with a whitespot (anti-Ich) remedy such as API® White Spot Cure. This disease can be fatal if not treated promptly.
 Red marks or ulcers on the body.	Bacterial infection. Dirty water conditions can sometimes be a cause.	Treat the aquarium with an anti-bacterial remedy, such as Melafix®. Improve aquarium hygiene, where necessary.
 Torn or ragged fins.	Fin rot disease. Dirty water conditions may trigger fin rot.	Treat the aquarium with Melafix® or similar fin rot remedy. Improve aquarium hygiene, where necessary.
 Loss of appetite or clamped fins.	1) Dirty water conditions. 2) Sudden fall in water temperature. 3) Early stage of an illness.	A partial water change may perk up the fish. Check the water temperature. Monitor the fish for any other signs of ill health.
 Gasping for air at the surface.	Lack of oxygen in the water. This can arise if the aquarium is very dirty or overcrowded, or if the water has got too warm (e.g. on a hot sunny day).	Perform a 30-50 per cent water change. Improve aquarium hygiene and/or increase aeration, as appropriate. Buy a larger tank if appropriate.
 Lying on the bottom of the tank.	The fish may simply be resting. But if it has lost its appetite then it may be sick.	A partial water change may perk up the fish. Monitor the fish for any other signs of ill health.
 Floats to surface.	1) If it is a temporary problem (ie the fish swims normally for much of the time) then it may be air trapped in the fish's gut. This can happen if the fish feeds greedily at the surface and gulps air. 2) If the fish is permanently floating then it may be a swim bladder problem (the swim bladder is a gas-filled bag within the fish's body)	1) Hold the food under the water for a second or two before releasing it, so the fish has to feed in mid-water. 2) If a swim bladder problem is suspected then get professional advice (eg from an aquarium shop or vet).

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## FREQUENTLY ASKED QUESTIONS

### Q. How many goldfish can I keep in my tank?

A. The standard 60 x 30 x 30 cm (24 x 12 x 12 inch) tank holds about 45 litres (10 gallons) of water and will house two to three goldfish.

### Q. What sort of filter is best for a goldfish aquarium?

A. There are many types to choose from. Internal canister filters are particularly popular and are easy to maintain. These models have an integral motorised pump. Visit your aquarium or pet shop for advice about filter models to suit your size of tank and budget.

### Q. Should I leave my filter running all of the time?

A. Yes. Only switch it off to clean or service it. If it is switched off for more than a few hours then the friendly filter bacteria may die.

### Q. Should I add snails to my tank?

A. Although considered useful scavengers, in reality snails can multiply to prolific numbers and cause more dirt than they clear up. If snails do become a nuisance you can keep their numbers in check by routinely removing some with a net or siphon tube. You may see the snail's jelly egg masses on the aquarium glass and other underwater surfaces.

### Q. Why is my aquarium water cloudy?

A. The water in a newly set up aquarium may be cloudy for the first couple of days, but should clear.

If an established aquarium becomes cloudy then it may be a sign that the filtration is not adequate or is not working properly, or that the aquarium needs a clean. Perform a 50% partial water change, siphon off excess dirt from the gravel, and check the filter (see routine maintenance page 9). If cloudy water problems persist you can buy a special water clearing solution (such as Accu-Clear®) from your aquarium or pet shop.

### Q. How can I tell if my goldfish is a boy or girl?

A. Distinguishing between the sexes is difficult. One clue is during breeding time (typically around spring) when mature male goldfish develop tiny white spots on their gill covers and pectoral fins. These are known as spawning tubercles. Don't mistake these spots for whitespot disease!

### Q. Do goldfish lay eggs?

A. Yes. Their sticky eggs are about 1.5 mm (one sixteenth of an inch) in diameter. They are normally scattered amongst fine-leaved aquatic plants. A female goldfish may lay several hundred eggs. The young fish hatch in a few days.

Consult a good goldfish book if you wish to have a go at breeding them.

### Q. My goldfish is changing colour. Is it sick?

A. A goldfish's colours may alter during its life. Young goldfish are typically olive-brown and gradually acquire their adult colours as they grow. Old goldfish, on the other hand, tend to pale with age and may eventually turn silvery white. Environmental conditions, such as an increase in water temperature or very bright lights, may cause the goldfish's colours to temporarily pale. Provided the fish appears healthy and is feeding normally, these colour changes should not give cause for concern.

### Q. Which sorts of live plants are suitable for goldfish tanks?

A. Goldfish have a tendency to nibble and uproot live plants, which is why artificial ones are popular. But if you want to have a go at underwater gardening then the following two plants are worth trying: Java fern (*Microsorium pteropus*) and Ludwigia (*Ludwigia palustris*).

Canadian pondweed (*Elodea*) is extremely popular and inexpensive, although goldfish tend to destroy it, so it will need replacing from time to time.

### Q. Can I keep goldfish in a tropical aquarium?

A. It is best not to. Although goldfish have a wide temperature tolerance, they prefer not to be kept under constant tropical conditions.

If you have any further questions then visit the Aquarian® website [www.aquarian.co.uk](http://www.aquarian.co.uk) or write to the **Aquarian® Advisory Service**, PO Box 5059, Melton Mowbray, Leics. LE14 4ZN.

**Happy Fishkeeping!**



# ADVANCED NUTRITION

